CA BOCES

Career & Technical Education

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CTE Center at Belmont

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CTE Center at Ellicottville

5550 Route 242 E, Ellicottville, NY 14731................................................................. 716-376-8300

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CTE Center at Olean

1825 Windfall Rd., Olean, NY 14760.............................................................................. 716-376-8410

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# Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>CTE Credits and Credentials</td>
<td>2</td>
</tr>
<tr>
<td>Integrated Academic / Early Entry CTE</td>
<td>3</td>
</tr>
<tr>
<td>Animal Science</td>
<td>4-5</td>
</tr>
<tr>
<td>Audio Visual Production</td>
<td>6-7</td>
</tr>
<tr>
<td>Automotive Technology</td>
<td>8-9</td>
</tr>
<tr>
<td>Carpentry and Construction Trades</td>
<td>10-11</td>
</tr>
<tr>
<td>Collision Repair and Auto Body Technology</td>
<td>12-13</td>
</tr>
<tr>
<td>Cosmetology</td>
<td>14-15</td>
</tr>
<tr>
<td>Criminal Justice</td>
<td>16-17</td>
</tr>
<tr>
<td>Culinary Arts</td>
<td>18-19</td>
</tr>
<tr>
<td>Early Childhood Education and Human Services</td>
<td>20-21</td>
</tr>
<tr>
<td>Heavy Equipment Operations</td>
<td>22-23</td>
</tr>
<tr>
<td>Media Communications Technology</td>
<td>24-25</td>
</tr>
<tr>
<td>Medical Assisting</td>
<td>26-27</td>
</tr>
<tr>
<td>Natural Resources</td>
<td>28-29</td>
</tr>
<tr>
<td>New Vision - Educational Careers</td>
<td>30-31</td>
</tr>
<tr>
<td>New Vision - Health Professions</td>
<td>32-33</td>
</tr>
<tr>
<td>Power Equipment Technology</td>
<td>34-35</td>
</tr>
<tr>
<td>Pre-Engineering and CADD</td>
<td>36-37</td>
</tr>
<tr>
<td>Product Design and Manufacturing</td>
<td>38-39</td>
</tr>
<tr>
<td>Welding and Metal Fabrication</td>
<td>40-41</td>
</tr>
<tr>
<td>Enriching Learning with Nanotechnology</td>
<td>42</td>
</tr>
<tr>
<td>CTE Facts</td>
<td>43</td>
</tr>
</tbody>
</table>

Revised July 2021
CTE Credits

Home school distribution of credits:

> **Year 1**
  - 2.0 Units - Career & Technical Education
  - 0.5 Units - CTE Integrated / Specialized Math
  - 0.5 Units - CTE Integrated / Specialized Science
  - 0.5 Units - Integrated ELA

> **Year 2**
  - 2.0 Units - Career & Technical Education
  - 0.5 Units - CTE Integrated / Specialized Math
  - 0.5 Units - CTE Integrated / Specialized Science
  - 0.5 Units - CTE Integrated ELA

Earn a Regents Diploma with a 4+1 CTE Pathway

Meet the minimum diploma requirement. Pass 4 required Regents exams, in each discipline. Successfully complete a NYSED approved CTE Program which includes:

- 3 or more CTE credits
- Work based learning experience opportunity
- National technical assessment
- An employability profile

Meet or exceed the NYS cut score on both written and performance portion of the approved Pathway Assessment.

CTE technical assessments aligned with approved CTE programs of study are now considered as approved + 1 Pathway Assessments and may be used as the fifth required exam toward graduation.

STUDENTS EXIT WITH A REGENTS DIPLOMA

Earn a CTE Technical Endorsement

Meet the minimum diploma requirements. Pass 5 required Regents exams or approved alternate (Pathway Assessments to the left). Successfully complete a NYSED approved CTE Program which includes:

- 3 or more CTE credits
- Work based learning experience opportunity
- National technical assessment
- An employability profile

Meet or exceed the NYS cut score on the written and performance portions of the approved program assessment. Successfully develop a portfolio, and complete a Work Based Learning Experience.

STUDENTS EXIT WITH A REGENTS DIPLOMA WITH TECHNICAL ENDORSEMENT
Do I take Math, Science, and ELA at CTE? ..... Yes!

High-quality CTE programs ensure that coursework is simultaneously aligned to rigorous academic standards and postsecondary expectations. CTE programs use applied, contextual learning to help students see the relevance of what they are learning and its connection to career opportunities and life goals. These programs also provide innovative options for supporting students with different learning styles.

CTE programs have a fundamental advantage because they are modeled closely after real careers students may one day enter. The students can readily demonstrate the answer to questions such as “How am I ever going to use this?” and “Why should I learn this?”. Reading, written communications, listening, speaking and mathematical reasoning (with problem solving) are embedded in careers.

Academic and CTE teachers work together to parallel their coursework and jointly teach cross-disciplinary projects that tackle real-world problems.

- **Science** - Biology, Chemistry, and Physics concepts are learned and utilized in many of the CTE areas. Anatomy and Physiology are extensively covered as well. The students are using a scanning electron microscope, AFM (Atomic Force Microscope) and nanotechnology concepts to discover more about their specific tech areas.

- **Math** - Algebra, Geometry, Trigonometry, Algebra 2, and Pre-calculus concepts, are taught and integrated into the lessons and hands on applications.

- **ELA** - The students use various technologies to create presentations, portfolios, and inventories. The students create a viable professional portfolio that includes a cover letter, resume, references, examples of their work-based learning experiences both in and out of the center. Students are also taught technical writing, customer communication skills, professional vocabulary, grammar and editing skills.

Early Entry CTE is designed to reinforce employability and academic skills. This program provides students the opportunity to develop the skills and work habits they will need to succeed in work and life after high school. This program supports the needs of students who are having difficulty connecting traditional academic instruction to practical application and process. Content is structured around CTE skills and activities, which are used to teach and reinforce CDOS and academic skills, including ELA, Math, Science, and Technology. This program focuses on preparing students for CTE programs or entry level employment. Students enrolled in Early Entry CTE will have the option to earn a .5 health credit along with a 1.0 math credit as determined by the District.
Animal Science

What it’s about

Animal Science is a rigorous two-year Career and Technical Education program designed to explore the diverse field of animal science. Students will recognize the important roles animals play in society from individual ownership to scientific research with far reaching implications. Animal Science students will acquire basic knowledge and skills necessary for further study or entry level positions in animal science and related fields. This technical course teaches specialized and advanced skills in areas such as veterinary assisting, care and handling of animals in a laboratory or veterinary setting, dog grooming, and kennel/pet shop management. Classroom opportunities include the development of animal handling skills and the study of animal behaviors through care and observation of animals housed in the classroom. This class also covers animal anatomy and physiology, care, behavior, breeding, body systems, genetics, training, and management of various animals. The challenging curriculum was written by Cornell University and Pennsylvania State University. Course materials are enhanced with hands-on activities that include daily lab/clinic and field trips. Students are encouraged to participate in FFA and SkillsUSA activities and competitions that will enhance instruction and provide the opportunity to develop leadership skills.

Where it can lead

- Pet Groomer
- Veterinary Assistant
- Veterinarian
- Animal Rescuer
- Dairy Farm Worker
- Stable Worker
- Zoo Keeper
- Animal Trainer
- Biologist
- Wildlife Conservationist

What you can earn

- New York State Technical Endorsement on High School Diploma
Things you get to do

- In-house dog grooming salon open to community and run by students with instructor supervision
- Breeding project
- Visitations to veterinary clinics, SPCA, zoo, farms
- Animal care and clinical duties
- Alpaca Shearing

Colleges with Enrollment Agreements

- **Alfred State College**
  3 credits Veterinary Technical Elective in Veterinary Technology program. To qualify, student must have B+ or 85% average each year in BOCES program; Acceptance into ASU program; Copy of BOCES transcript; Letter to program Director requesting articulation.

- **Medaille College**
  Credit granted for VET 177: Preceptorship (1 credit), VET 100: Introduction to Veterinary Technology (3) and a Free Elective (3). To qualify, student must achieve an 85% or better in Animal Science, complete an internship of at least 30 hours with supporting documentation (VET 177), and pass a Competency Test with a 70% or higher (VET100).

- **SUNY Cobleskill**
  6 credits possible: 3 credits for ANSC 140 (Small Animal Management) and 3 credits for ANSC 111 (Intro to Animal Science) after passing college’s challenge exam. To qualify, student must have an 85 average in BOCES program; NYS High School Diploma; Instructor recommendation; Complete SUNY Cobleskill application and send with recommendation.

Where it is held

- **Career and Technical Education Center at Belmont**
  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Ellicottville**
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300

- **Career and Technical Education Center at Olean**
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410
Audio Visual Production

What it's about

The goal of this program is to introduce students to the many aspects of the audio and visual mediums that are currently being used in music and audio applications and visual production. Our visual work focuses on photo framing and composition, cinematography techniques and 2D animation with green screen. In audio, we currently focus on music multi-track recording, effect process engineering and scoring for visual productions.

Students will gain a working understanding and practice a wide variety of applications associated with the audio and video industry standard software including Adobe Photoshop, Audition, Pro Tools, After Effects, Avid and Sony Acid programs.

Applications of software include:

- Creating music scores for all video productions, Multi-track music writing, performance and post mixing.
- Graphic layout and design of CD and DVD jackets and promotional flyers, 2D animation and green screen CG.
- Film making, including filming, editing and scoring, commercial production, broadcast journalism, and music videos.

Where it can lead

- Television Producer
- Audio Producer
- Web Designer
- Photographer
- Videographer
- Director
- On Air Talent
- Blogger
- Audio Visual Engineer

What you can earn

- New York State Technical Endorsement on High School Diploma
Things you get to do

- Film Festival
- Slam Poetry Reading with Video
- On Location Shooting of Video
- Use of Red Cinema Camera
- 2D Animation
- Lightwave Software
- Video Competitions

Colleges with Enrollment Agreements

- **Bryant & Stratton College**
  Up to 9 credits from the following (3 credits each): GRAD 100 (Introduction To Design); GRAD 115 (Page Layout); INMD 100 (Introduction to Web Design); TECH 100 (Business Information Systems and Principles); TECH 130 (Hardware and Operating Systems); BUSS 100 (Business Principles); COMM 150 (Intro to Information Literacy and Research).
  To qualify, student must have 85% average in BOCES CTE program; Instructor Letter of Recommendation; Complete Bryant & Stratton admission application and enroll in two-year program; Must enroll in B&S within 15 months of high school graduation; Provide BOCES CTE transcript and certificate of program completion.

- **Cayuga Community College**
  Up to 6 credits advanced standing. To qualify, student must have Instructor recommendation and high school diploma or GED.

- **Medaille College**
  Receive 3 credits for COM 200: Digital Media Production. To qualify, student must achieve an 85% or better in Audio Visual Production.

Where it is held

- **Career and Technical Education Center at Olean**
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410
This course, taught by ASE certified instructors, will prepare students for careers and further study in the changing field of automotive technology through hands-on project-based learning experiences. The program goal is to prepare students for entry level automotive careers and further study in automotive maintenance and light repair. Options for further study include Automotive Technology/Mechanics, Motorsports, Parts and Service Technology, Motorcycle Technology, ATV and Diesel Mechanics. Students gain experience through a hands-on laboratory workspace. Projects include oil changes, tires, brakes, exhaust systems, engine work, electrical repairs, and NYS inspections. Students have the opportunity to participate in SkillsUSA competitions as well as other competitions that are sponsored by car dealerships and car manufacturers. Some of these competitions may result in prizes of tools or scholarships.

Where it can lead
- Fleet Operations Manager
- Automotive Repair Technician
- Service Manager
- Shop Owner
- Automotive Designer
- Mechanic
- Automotive Engineer

What you can earn
- New York State Technical Endorsement on High School Diploma
- ASE Certification
- OSHA Certification
Things you get to do

- Trips to GM Tonawanda Engine Plant
- Buffalo Auto Show
- Cummins Engine Plant
- Ford - AAA Student Auto Skills Competition
- Niagara Falls Auto Dealers Competition at Erie Community College

Colleges with Enrollment Agreements

- **Alfred State College**
  Course requirements waived based on NATEF / I-CAR / NYS Inspection checklists. To qualify, student must have 80% average in BOCES program; Instructor recommendation included with Alfred State College application; Complete Automotive Trades articulation credit transfer form with Instructor; present portfolio (Profile) and review with Alfred advisor within five days of the start of the semester; Maintain 2.5 GPA at ASU.

- **Erie Community College**
  3 credits total; 2 credits for AU 150 (Introduction to Automotive Technology) and 1 credit for AU 268 (NYS Inspection). To qualify, student must have 85% average in BOCES program; High school diploma; Submit ECC High School Transfer Credit Reference Form signed by BOCES instructor; Pass ECC math and English placement test.

- **Ohio Technical College**
  Credit for up to four Automotive Technology Modules. To qualify, student must be enrolled in ASE/NATEF Certified program; provide copy of certification to OTC; “B” average or higher in BOCES program; Pass test at OTC in modules for which credit will be granted; Start at OTC within one year of high school graduation.

- **Pennsylvania College of Technology**
  Advanced placement based on competency assessment form. If student accepted into program, must request “Competency Assessment” form; BOCES instructor completes and returns form to college; credit granted after college review.

- **SUNY Morrisville**
  3 credits for Auto 110 (Summer Work Experience). To qualify, student must have work based learning activity (Internship); Earn CTE Technical Endorsement; 2.0 average or better for first year at Morrisville.

- **University of Northwestern Ohio**
  Up to 12 Credit hours: 6 credit hours for AU126 - Suspension and Steering 6 credit hours for AU127 - Hydraulic Brake Systems. To qualify, student must complete two year CTE - NATEF Auto Technology program with a “B” or better both years. Teacher must complete a articulation application form for each student attending.

Where it is held

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  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Ellicottville**
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300

- **Career and Technical Education Center at Olean**
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410
Carpentry and Construction Trades

What it’s about
The Carpentry and Construction Trades course affords students the opportunity to experience the basics in a multitude of trade areas. The program provides students with classroom instruction and hands-on experiences in various aspects of the construction industry. Students learn the basics of construction, electrical wiring, masonry, carpentry, plumbing and heating. This two-year program provides students with basic knowledge of tools, methods, and materials used in carpentry and construction trades. Students can tailor the program around career interests, whether it be carpentry, construction, residential electrical, HVAC, or plumbing. Shop safety and a safe work environment are a fundamental part of the class. Students will spend time in the classroom and will go to job sites. Students who complete this course are prepared for entry level employment or further studies in carpentry/construction trades.

Where it can lead
- Carpenter
- Electrician
- HVAC
- Mason
- Cabinet Maker
- Construction Laborer
- Construction Manager
- Code Enforcement Officer
- Plumber

What you can earn
- New York State Technical Endorsement on High School Diploma
- OSHA Certification
- CPR/First Aid Certification
Things you get to do

- Learn in a hands-on environment
- Build projects and take them home
- Forklift training
- OSHA Certification
- Work outside of the Classroom
  - Bocce Court for Community Organization
  - Sustainable Garden Project
  - Paver Project for Veterans Memorial
  - Shed Project Community Organization
  - Bench Project for Library
  - Porch Project for Residence
  - Picnic Tables for School District

Colleges with Enrollment Agreements

- **Alfred State College**
  10 credits possible, based on evaluation: 2 credits for Portable Tools and Fastening Systems
  2 credits for Construction Math; 3 credits for Pipe Fitting - Math Estimating; 3 credits for Plumbing Trade History & Safety. To qualify, student must have acceptance into ASU Building Trades Dept; Performance evaluation by Dept. Chair to determine amount of credit granted; Pass course written exam; 85% average in BOCES program.

- **Erie Community College**
  6 credits total; 3 credits each for: BM 130 (Building Systems I), BM 281 (Facilities Maintenance & Environmental Topics). To qualify, student must have 85% average in BOCES program; High school diploma; Submit ECC High School Transfer Credit Reference Form signed by BOCES instructor; Pass ECC math and English placement test.

- **Pennsylvania College of Technology**
  Advanced placement based on competency assessment form. If student accepted into program, request “Competency Assessment” form; BOCES instructor completes and returns form to college; credit granted after college review.

- **Triangle Tech**
  Credit granted for courses for which student passes advanced standing tests with grade of 75 or better. To qualify, student must have 2.0 high school grade average; apply by Dec. 31 prior to graduation, or within one year of graduation date, if already graduated; complete math and reading placement tests.

Where it is held

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  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Ellicottville**
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300
Collision Repair and Auto Body Technology

What it's about

Collision Repair/Auto Body covers all aspects of collision repair and finish work on vehicles. In the shop setting, students experience the methods of complete auto collision repair, working on damaged vehicles. They also learn several methods of custom design finish work and accurate estimating procedures. Our Collision Repair Shops are state-of-the-art and are evolving from solvent based paint to the latest environmentally friendly technology of low emission, water borne paint with down draft paint booths. Students learn automotive structure, become familiar with the tools used in collision repair, and master a variety of repair techniques. The class gives students a solid foundation, and the required certification, for entry level work in the collision field or for further study in this growing industry.

Where it can lead

- Collision Repair Technician
- Insurance Adjuster
- Auto Glass Installer/Repairer
- Auto Parts Salesperson
- New and Used Car Detailer
- Airbrush Specialist
- Detail Technician
- Collision Shop Owner
- Paint Technician

What you can earn

- New York State Technical Endorsement on High School Diploma
- I-CAR Certification
- OSHA Certification
Things you get to do

- Authentic repair practices by working on damaged vehicles
- Frame straightening and repair
- Refurbishing and refinishing multiple surfaces
- Demonstration from Airbrushing Artists

Colleges with Enrollment Agreements

- **Alfred State College**
  Course requirements waived based on NATEF / I-CAR / NYS Inspection checklists. To qualify, student must have 80% average in BOCES program; Instructor recommendation included with Alfred State College application; Complete Automotive Trades articulation credit transfer form with instructor; present portfolio (Profile) and review with Alfred advisor within five days of the start of the semester; Maintain 2.5 GPA at ASU.

- **Erie Community College**
  4 credits, two each for AB 130 (Introduction to Autobody Repair) and AB 140 (Detailing). To qualify, student must have 85% average in BOCES program; Instructor letter of recommendation; Copy of high school transcript; Submit Articulations Admissions form; Take ECC math and English pretests; Complete required 62 credit hours at ECC.

- **Ohio Technical College**
  Credit for up to four Collision Repair and Refinishing Modules. To qualify, CA BOCES must have an ASE/NATEF Certified or ICAR-based program; provide copy of certification to OTC; student must have “B” average or higher in BOCES program; Pass test at OTC in modules for which credit will be granted; Start at OTC within one year of high school graduation.

- **Pennsylvania College of Technology**
  Advanced placement based on competency assessment form. If student accepted into program, request “Competency Assessment” form; BOCES instructor completes and returns form to college; credit granted after college review.

- **SUNY Morrisville**
  3 credits for Auto 110 (Summer Work Experience). To qualify, student must have work based learning activity (Internship); Earn CTE Technical Endorsement; 2.0 average or better for first year at Morrisville.

- **Universal Technical Institute**
  Credit for up to four courses after passing I-CAR test modules, or $500 tuition credit. To qualify, student must have successful graduation from Ellicottville CTE Center Collision Repair program; Student must test or show proof of passing I-CAR tests that correspond to the course(s) being waived; Begin at UTI within one year of high school graduation.

Where it is held

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  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Ellicottville**
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300

- **Career and Technical Education Center at Olean**
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410
The Cosmetology program is a 1000-hour hands-on introduction to the exciting and creative world of the beauty industry with an emphasis on professionalism and guidelines set forth by the New York State Division of Licensing. Students who successfully complete the program are eligible to take the New York State Board Exam to become a licensed Cosmetologist. The course is designed to prepare students to pass both the written and practical New York State Department of Licensing exam in Cosmetology, obtain the knowledge and skills needed for an entry level position within the beauty industry, or seek advanced training in the field. The program provides a curriculum which includes theory, practical, professional, ethical and health awareness. Students practice techniques in a supervised clinic which consists of a full service salon.

Where it can lead

- Salon Owner
- Licensed Cosmetologist
- Nail Technician
- Esthetician
- Stylist
- Master Stylist
- Beauty Consultant

What you can earn

- New York State Technical Endorsement on High School Diploma
- New York State Appearance Enhancement License
**Things you get to do**

- Trip to the Ellicottville Salt Cave Halotherapy Spa
- Tour local spas
- Perform hair and nail care at local businesses and organizations for public service
- Seniors run in-house salon
- Make-overs for Media Class Fashion Photography Shoot
- Manicure/Pedicure Contests

**Colleges with Enrollment Agreements**

- **Alfred State College**
  3 credits for Small Business Management.
  To qualify, student must have letter of recommendation from Instructor; “C” or better in Cosmetology program; High school diploma.

- **Bryant and Stratton College**
  3 credits for BUSS 100 Business Principles.
  To qualify, students must have 85% average in BOCES CTE program; Instructor Letter of Recommendation; Complete Bryant & Stratton admission application and enroll in two-year program; Must enroll in B&S within 15 months of high school graduation; Provide BOCES CTE transcript and certificate of program completion.

**Where it is held**

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  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Ellicottville**
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300

- **Career and Technical Education Center at Olean**
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410
The Criminal Justice program prepares students for careers and further study in the field of Criminal Justice. The Criminal Justice System covers the fields of police, courts and corrections. Students will study law, both criminal and civil, including New York State Penal, Criminal Procedure, and Constitutional. Students will gain knowledge in many aspects of law and law enforcement through instruction and hands on activities. Students will develop a strong foundation of knowledge, as well as an understanding of the criminal justice system. Upon completion, students will be better prepared for continued studies in criminal justice, entry level law enforcement positions or military service.

Where it can lead
- Security Guard
- Police Officer
- Attorney
- Parole/Probation Officer
- Military Member
- Detective, Private Investigator
- Correction Officer

What you can earn
- New York State Technical Endorsement on High School Diploma
- New York State Security Guard Certification
- First Aid and CPR Certification
**Things you get to do**

- Crime Scene Searches and Sketches
- Traffic Stops
- Field Sobriety
- Mock Trials
- COP Camp
- National Guard Physical Training
- Trips to Local Courts
- Trips to Regional Prisons

**Where it is held**

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**Colleges with Enrollment Agreements**

- **Bryant and Stratton**
  Up to 6 credits from the following (3 credits each): CRJU 100 (Intro to Criminal Justice); CRJU 110 (Criminal Courts); PLEG 100 (Intro to Law, Research, and Ethics). To qualify, students must have 85% average in BOCES CTE program; Instructor Letter of Recommendation; Complete Bryant & Stratton admission application and enroll in two-year program; Must enroll in B&S within 15 months of high school graduation; Provide BOCES CTE transcript and certificate of program completion.

- **Corning Community College**
  6 credits of Criminal Justice electives. To qualify, student must have 85% average in BOCES program; Must apply within two years of BOCES program completion; Instructor recommendation; Submission of BOCES Portfolio.

- **Erie Community College**
  3 credits CR 150 (Introduction to Criminal Justice). To qualify, student must have 85% average in BOCES program; High school diploma; Submit ECC High School Transfer Credit Reference Form signed by BOCES instructor; Pass ECC math and English placement test.

- **Herkimer County Community College**
  6 credits total for: CJ: Intro to Law and Criminal Justice Electives. To qualify, student must have B average in BOCES program.

- **Hilbert College**
  6 credits total; 3 credits each for: CJ 101 (Introduction To Criminal Justice) and CJ 103 (Introduction to Security) possibility of $2,000 scholarship for each of 4 years. To qualify, student must have acceptance into Hilbert program.

- **Medaille College**
  Receive 3 credits for CRJ 101: Introduction to Criminal Justice and a Free Elective (3 credits). To qualify, student must achieve an 85% or better in Criminal Justice.

- **Pittsburgh Technical College**
  8 credits total; 4 credits each for: SSA 100 (Intro to Criminology & Criminal Procedures) SSA 120 (Criminal Procedures). To qualify, student must have “B” or better average in BOCES program; 80% or better on PTI’s final course exam; Notify Financial Aid Dept. of intention to articulate; Apply within one year of graduation.
Students in this course are actively involved in all areas of the restaurant industry using a state of the art kitchen, dining room facility. This is a very hands-on professional program. Experiences include plating, portioning and garnishing a variety of foods, meat preparation, standard restaurant-style preparation, daily safety, and sanitation inspection. Students will also learn planning, ordering, preparation, quality controls, service, and presentation. Students will prepare and serve high quality meals to faculty, students, and community groups. Students will also have banquet and catering experiences.

What you can earn

› New York State Technical Endorsement on High School Diploma
› ServSafe Certification

Where it can lead

› Food & Beverage Director
› Executive Chef
› Restaurant Manager
› Pastry Chef
› Sous Chef
› Bartender
› Server
› Line Cook
Things you get to do

- SkillsUSA Competitions
- International Food Presentation
- Pumpkin Carving
- Gingerbread House Creation
- Co-learn and teach with guest chefs and college students
- Cater BOCES events
- Operate window food service at school
- Food preparation for community events

Where it is held

- Career and Technical Education Center at Belmont
  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

- Career and Technical Education Center at Ellicottville
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300

- Career and Technical Education Center at Olean
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410

Colleges with Enrollment Agreements

- Alfred State College
  4 credit hours for FS 1084 (Sanitation and Food Safety). To qualify, students must have 60 hours of NRA ServSafe Certification course in senior year; Pass ServSafe NRA Certification exam with minimum grade of 85%; 90% course grade. Credit granted for CULN 1153, 1143 (Baking or Culinary Foundations) and 3 Credit Hours for CULN 1083 (Food Safety & Service Training). To qualify, student must be accepted into and enrolled at Alfred State; Must pass Culinary with 80%+ average; Must pass ServSafe NRA Managers Certification exam, proctored by a ServSafe certified proctor and with a minimum grade of 75% and thereby have a valid certificate. Provide documentation to the department on the first day of classes.

- Bryant & Stratton College
  Up to 6 credits from the following (3 credits each): REST 101 (Introduction to Hospitality); HOSS 110 (Introduction to Hospitality Management); BUSS 100 (Business Principles). To quality, student must have 85% average in BOCES CTE program; Instructor Letter of Recommendation; Complete Bryant & Stratton admission application and enroll in two-year program; Must enroll in B&S within 15 months of high school graduation: Provide BOCES CTE transcript and certificate of program completion.

- Culinary Arts Institute of America
  1.5 Credits in Food Safety for successfully completing the ServSafe Certificate of Completion. Students will have fulfilled their pre-enrollment requirement of six months hands-on food service experience. The application fee is waived. Students will be eligible for the CIA Merit Scholarship program offering a min of $5,000 per year. To qualify, student must have Certificate of Completion for the Food Safety ServSafe course. Successfully completed at least one academic year of a culinary program.

- Erie Community College
  8 credits - four each for: HC104 (Culinary Arts Basic Skills) and HR 135 (Food Preparation Techniques) (can also receive credit for HR 136 if ServSafe certified). To qualify, student must have 90% average in BOCES program; High school diploma; Submit ECC High School Transfer Credit Reference Form signed by BOCES instructor; Pass ECC math and English placement test; Pass ECC performance test for HC104 credit.

- Jamestown Business College
  12 credits - 6 each for IT131 (Computer Applications 1); ENG 151 (College English 1). To qualify, student must have 8 average in BOCES program; Instructor recommendation High school diploma; 80% or better on college course proficiency exam.

- Johnson & Wales University
  Possible 9 credits (must pass practical exams) - 3 credits each for CUL 1345 (Introduction to Baking & Pastry); CUL 1355 (New World Cuisine); CUL 1385 (Fundamentals of Food Service Production). Also, student is exempt from FSM 1065 (Sanitation Management) with submission of ServSafe certificate with admissions application. To qualify, student must meet acceptance requirements to Johnson & Wales; Complete two-year Culinary Arts program with a “B” average; Pass practical exam for each course to receive credit; exams cost $100 each.

- Lincoln Culinary Institute
  4.5 credits CUL 140S (Introduction to Culinary Arts). To qualify, student must have acceptance at LCI, Hartford or Suffield campus; High school diploma; “B” average (3.0 GPA) in BOCES program; High attendance rate.

- NCCC
  Students will earn 8 credits: CUL 120: Principles of Baking (3 credits), CUL 122: Breakfast and Lunch (3), and CUL 123: Production Experience Laboratory (2). To qualify, student must complete the 2 year Culinary Arts program with an 85% or higher average, be accepted to NCCC, and receive a recommendation from their instructor.

- Paul Smith’s College
  3 credits for General Elective. To qualify, student must have B average in BOCES program; Indicate participation in Culinary Program at CA BOCES on application.

- SUNY Cobleskill
  8 credits total possible; 3 credits for CAHT 111 (Basic Food Preparation) and 2 credits for CAHT 290 (General Elective); also, 3 credits for CAHT 140 (Hospitality Math) based on achieving 75% on Math Challenge exam. To qualify, student must have 85% average in BOCES program; NYS High School Diploma; Instructor written recommendation; Complete SUNY Cobleskill application and send with recommendation.
In the Early Childhood program, students learn about the characteristics, needs, and behavior of young children. Students participate in a preschool learning lab at the CTE Center and/or at local district elementary schools. Internships and partnerships with home schools are ongoing throughout the second year. Classroom and lab work is rigorous, relevant to the career field, and prepares students for success in the post-secondary educational setting. Upon completion of this program, students have the opportunity to leave with a Child Development Associate (CDA) Credential, as well as credits toward education at JCC and other colleges and universities. This program offers students the foundation for introduction to teaching, as well as child development careers in child care, physical therapy, occupational therapy with a concentration in education.

Where it can lead

- K-6 Teacher
- Child Care Provider
- Pre-School Teacher
- Physical Therapist
- Occupational Therapist
- Nanny

What you can earn

- New York State Technical Endorsement on High School Diploma
- CDA Credential
- CPR/First Aid Certification
Things you get to do

- Conduct learning labs in local elementary schools and CTE Classroom
- Attend local elementary schools for practicum
- Visit Head Start program
- Trips to Pumpkinville, Sesame Street Live, Chuck E Cheese, Exotic Animal Farm

Colleges with Enrollment Agreements

- **Corning Community College**
  3 credits for EE104 (Methods & Materials in Early Childhood Education). To qualify, student must have 85% average in BOCES program; High school diploma or GED; Instructor recommendation; Meeting with CCC’s Director of Early Childhood Program to evaluate portfolio.

- **Erie Community College**
  7.5 credits: CC200 (Early Childhood Ed 1), 3 credits, CC201 (Lab for CC200), 1.5 credits, CC360 (Art Experience for Young Children), 3 credits. To qualify, student must have 85% average in BOCES program; High school diploma; Submit ECC Articulation Credit Reference Form signed by BOCES instructor; Pass ECC math and English placement test.

- **Jamestown Community College**
  Credits granted for EDU 1250: Early Childhood Development (1 credit), EDU 1260: Health/Safety/Nutrition of Children (3), EDU 1290: Introduction to Early Childhood Education/Cte (3), and EDU 2210: Field Placement 1-Education (4). To qualify, student must meet JCC’s admission requirements and submit an official copy of CDA certificate.

- **Medaille College**
  Receive 3 credits for EDU 240: Literacy 1: Literacy Development and Pre-Emergent Literacy. To qualify, student must achieve an 85% or better in Early Childhood.

- **Pennsylvania College of Technology**
  Advanced placement based on competency assessment form. To qualify, student must be accepted into program, request “Competency Assessment” form; BOCES instructor completes and returns form to college; credit granted after college review.

- **SUNY Cobleskill**
  3 credits for ECHD 101 (Basics of Early Childhood). To qualify, student must have 85% average in BOCES program; Instructor recommendation; Meeting with Cobleskill’s Chair of Early Childhood Dept. to evaluate portfolio.

- **Trocaire College**
  Students will be granted 3 credits for ED 104: Introduction to Early Childhood Education. To qualify, student must achieve an 85% or better in Early Childhood, meet all college admission requirements, be recommended by their BOCES instructor, provide an official copy of their Employability Profile, and must submit six lesson plans and six instructors' evaluations.

Where it is held

- **Career and Technical Education Center at Belmont**
  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Ellicottville**
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300

- **Career and Technical Education Center at Olean**
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410
Heavy Equipment Operations will prepare students to operate a variety of equipment under the guidance of an experienced instructor. This two-year program will follow the NCCER (National Center for Construction Education and Research) curriculum as well as locally developed enhancements. The program provides instruction on the operation, general maintenance, and safety specific to the heavy equipment operations field. The two-year course will allow students to earn OSHA certifications, as well as a NYSED technical endorsement. Students will experience lab time of approximately 1.5 hours per day. During lab time, students are engaged in hands-on learning activities with various forms of heavy equipment.

What it’s about

Where it can lead

- Heavy and Tractor-Trailer Truck Driver
- Material Moving Machine Operators
- Agriculture Worker
- Heavy Equipment Operator
- Gas & Pipeline Operators
- Gravel & Quarry Pit Operators

What you can earn

- New York State Technical Endorsement on High School Diploma
- OSHA Safety Certification
**Things you get to do**

- Local 17 Operating Engineers Presentation
- 811 Call Before You Dig Class
- Forklift Training
- Tractor Trailer Pre-Licensing
- Bidding, Surveying, and Estimating
- Excavating Class

**Colleges with Enrollment Agreements**

- **Alfred State College**
  
  Course requirements waived based on NATEF / I-CAR / NYS Inspection checklists. To qualify, student must have 80% average in BOCES program; Instructor recommendation included with Alfred State College application; Complete Automotive Trades articulation credit transfer form with Instructor; present portfolio (Profile) and review with Alfred advisor within five days of the start of the semester; Maintain 2.5 GPA at ASU.

**Where it is held**

- **Career and Technical Education Center at Belmont**
  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Ellicottville**
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  Ellicottville, NY 14731
  716-376-8300
The Media Communications Technology program has been designed to give students the technical skills and hands-on experience they need to pursue a wide range of interests and opportunities in the digital design field. Students will learn to be designers in an ever-changing world.

Software to be covered includes Adobe Photoshop, Illustrator, InDesign, Lightroom, Premier, Audition, Muse, Fuse, After Effects and Animate. Media students will be prepared for exciting careers and studies in design, advertising, illustration, photography, video, and audio technology, as well as web, animation, game design, and marketing. Students are required to create a professional portfolio showcasing their knowledge and experiences both in print and on the web.

What you can earn
- Multiple Adobe Certifications including:
  - Adobe Photoshop
  - Adobe InDesign
  - Adobe Illustrator
  - Adobe Visual Design Specialist
**Where it is held**

- **Career and Technical Education Center at Belmont**
  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Ellicottville**
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300

- **Career and Technical Education Center at Olean**
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410

**Things you get to do**

- Posters for Community Organizations
- Video Production for County Tourism
- Radio Commercials for Stop DWI & Anti-Smoking Campaigns
- Portfolio Analysis and Review with Regional College Representatives
- Logo Development for Local Business
- Brochure Designs for Local, Community Organizations, and Festivals

**Colleges with Enrollment Agreements**

- **Bryant & Stratton College**
  Up to 9 credits from the following (3 credits each):
  - GRAD 100 (Introduction to Design)
  - GRAD 115 (Page Layout)
  - INMD 100 (Introduction to Web Design)
  - BUSS 100 (Business Principles)
  - TECH 100 (Business Information Systems Principles)
  - COMM 150 (Intro to Information Literacy & Research).
  To qualify, student must have 85% average in BOCES CTE program;
  Instructor Letter of Recommendation;
  Complete Bryant & Stratton admission application and enroll in two-year program;
  Must enroll in B&S within 15 months of high school graduation;
  Provide BOCES CTE transcript and certificate of program completion.

- **Erie Community College**
  2 credits for GA101 - Orientation to Graphics.
  To qualify, student must have 85% average in BOCES program;
  High school diploma;
  Submit ECC High School Transfer Credit Reference Form signed by BOCES instructor;
  Pass ECC math and English placement test.

- **Hilbert College**
  3 credits for a Liberal Arts course; free tuition for one course at Hilbert during Senior year;
  possibility of $2,000 scholarship for each of 4 years.
  To qualify, student must have acceptance into Hilbert program.

- **Jamestown Community College**
  (Dual Enrollment - Belmont Only)
  3 credits for CSC 1530 (Web Publishing).
  Credit granted through “College Connections” program;
  students must meet JCC minimum requirements and prerequisites.

- **Jamestown Community College**
  (Dual Enrollment - Olean Only)
  3 credits for ART 1670 (Introduction to Digital Photography).
  Credit granted through “College Connections” program;
  students must meet JCC minimum requirements and prerequisites.

- **Pittsburgh Technical College**
  4 credits for GDA 128 (Typography).
  To qualify, student must have “B” or better average in BOCES program;
  80% or better on PTI’s final course exam;
  Notify Financial Aid Dept. of intention to articulate;
  Apply within one year of graduation.

- **SUNY Cobleskill**
  4-6 credits total: 3 credits for GART 112 (Introduction to Digital Media) and 1-3 credits for GART 290 (Special Projects) based on portfolio review.
  To qualify, student must have 85% average in BOCES program;
  NYS High School Diploma;
  Instructor recommendation;
  Complete SUNY Cobleskill application and send with recommendation.

- **Villa Maria College**
  To qualify, student must meet admission requirements (application, transcripts, and interview), provide evidence of their work in their BOCES program, receive a high school diploma, have an 80% or better in Media Communications Technology each year.
The Medical Assisting program prepares students to be allied health professionals. Students will learn to perform routine clinical and administrative tasks that keep medical facilities running smoothly. Students will also learn interpersonal skills to work with medical personnel and patients. Students develop skills to put patients at ease, explain physician’s instructions, respect the confidential nature of medical information and perform all duties with a high level of professionalism. Students will participate in clinics throughout the two years, focusing on body systems, patient screenings and clinical assisting skills. Students will also participate in internships with medical facilities throughout their second year in the program.

**Where it can lead**
- Medical, Dental or Surgical Assistants
- EKG Technician
- Licensed Practical Nurse (LPN)
- Phlebotomist
- Registered Nurse (RN)
- Lab Tech
- Certified Nursing Assistant
- Dental Hygienist
- Radiology Technician
- Certified Physical or Occupational Therapist
- Health Information Specialist/Coder

**What you can earn**
- New York State Technical Endorsement on High School Diploma
- CPR Certification
- First Aid Certification
- National Medical Assistant Certification
Things you get to do

- Participate in Blood Drives
- Volunteer for Special Olympics
- Engage in Hospice Activities
- Participate in Community Health Fairs
- Present at Career Days

Where it is held

- Career and Technical Education Center at Belmont
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  Belmont, NY 14813
  716-376-8322

- Career and Technical Education Center at Ellicottville
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300

- Career and Technical Education Center at Olean
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  Olean, NY 14760
  716-376-8410

Colleges with Enrollment Agreements

- **Erie Community College**
  9 credits, three each for: MA 115 (Medical Terminology I); MA 125 (Medical Terminology II); BI 149 (Survey of Anatomy and Physiology). To qualify, student must have 85% average in BOCES program; High school diploma; Submit ECC High School Transfer Credit Reference Form signed by BOCES instructor; Pass ECC math and English placement test.

- **Jamestown Business College**
  18 credits - 6 each for: IT131 (Computer Applications I); OFT 110 (Keyboarding); OFT 112 (Medical Terminology). To qualify, student must have B average in BOCES program; Instructor recommendation; High school diploma; 80% or better on college course proficiency exam.

- **Jamestown Community College**
  (Articulation Agreement)
  6 credits total; 3 credits each for: BUS 1220 (College Keyboarding) and MOT 1420 (Medical Office Procedures). To qualify, student must have C or better in BOCES program; High school diploma; Instructor recommendation; High School Counselor recommendation.

- **Jamestown Community College**
  (Dual Enrollment)
  3 credits for MOT 1410 (Medical Terminology) and 3 credits for MOT 1420 (Medical Office Procedures). Credit granted through “College Connections” program; students must meet JCC minimum requirements and prerequisites.

- **Pittsburgh Technical College**
  10 credits total; 5 credits each for: MED 101 (Keyboarding) and MED 111 (Clinical Techniques I). To qualify, student must have “B” or better average in BOCES program; 85% or better on PTI’s final course exam; Achieve speed of 35 wpm and complete assigned tasks in Word; Pass vital signs competency; Notify Financial Aid Dept. of intention to articulate; Apply within one year of graduation.

- **Trocaire College**
  3 credits for Medical Terminology Keyboarding I waived. To qualify, student must have 85% average in BOCES program; C or better on the Medical Terminology challenge exam; Pass typing proficiency exam and achieve speed of 35 wpm; Attend Trocaire the year immediately following graduation.
Natural Resources are the building blocks of society. Water, soil, wood and wildlife are the raw materials that we rely on throughout our lives. The Natural Resources program is concerned with the management and conservation of these natural resources.

Students should be able to perform manual labor with hand tools and heavy equipment. Most fieldwork is outdoors so the student should be willing and able to spend extended periods outside and dress for the weather. Natural Resource students work with dangerous equipment in an open environment and must exercise caution and responsibility. The program will introduce students to the fields of forestry, environmental science, surveying and heavy equipment operation. The program will also prepare students for college or employment in related fields and develop a safe and cooperative work ethic.

What it’s about

Where it can lead

- Environmental Scientist
- Forester
- Survey Technician
- Heavy Equipment Operator
- Biologist
- Conservationist
- Arborist
- Logger
- Fish & Wildlife Manager

What you can earn

- New York State Technical Endorsement on High School Diploma
- OSHA 10 Hour Construction industry Certification
- NYLT (New York Logger Training) Certification
Things you get to do

- Logging and Firewood Production
- Road and Trail Maintenance
- Earth Moving
- Property Surveying
- Maple Syrup Production
- Water Quality Management
- Tree Planting and Care
- Wildlife Management
- Lumber Grading

Colleges with Enrollment Agreements

- **Alfred State College**
  **(Agricultural Technology)**
  3 credits Technical Elective in Agriculture Technology program. To qualify, student must have B+ or 80% average each year in BOCES program; Acceptance into ASU program; Copy of BOCES transcript; Letter to program Director requesting articulation.

- **Alfred State College**
  **(Automotive Trades Department)**
  Course requirements waived based on NATEF / I-CAR / NYS Inspection checklists. To qualify, student must have 80% average in BOCES program; Instructor recommendation included with Alfred State College application; Complete Applied Technology articulation credit transfer form with Instructor, present portfolio (Profile) and review with Alfred advisor within five days of the start of the semester; Maintain 2.5 GPA at ASU.

- **Bryant and Stratton College**
  Up to 6 credits from the following (3 credits each): BUSS 100 (Business Principles) and NSCI 280 (Ecology). To qualify, student must have 85% average in BOCES CTE program; Instructor Letter of Recommendation; Complete Bryant & Stratton admission application and enroll in two-year program; Must enroll in B&S within 15 months of high school graduation; Provide BOCES CTE transcript and certificate of program completion.

- **Paul Smith’s College**
  3 credits for General Elective. To qualify, student must have B average in BOCES program; Indicate participation in Natural Resources Program at CA BOCES on application.

- **Pennsylvania College of Technology**
  Advanced placement based on competency assessment form. If student accepted into program, request “Competency Assessment” form; BOCES instructor completes and returns form to college; credit granted after college review.

Where it is held

- **Career and Technical Education Center at Belmont**
  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Ellicottville**
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300
The New Vision - Educational Careers program is a one year, senior level, highly academic program that allows students to explore the education field while gaining high school and college credits. The program provides students the opportunity to learn education terminology, technology, structure, mandates, and services. Students will participate in rotations in a variety of educational settings including elementary, middle, and high school, as well as specialty areas such as special education, music, art, occupational therapy, physical therapy, speech, counseling and administration. Students will learn the roles and expectations of an educational professional in New York State. They will participate in mandated teacher training including mandated reporter, Dignity for All Students (DASA), health and safety, and Annual Professional Performance Review (APPR). Students will also be able to develop into informed citizens through course work in Economics and Participation in Government.

What it's about:

Where it can lead:
- Preschool Educator
- Elementary Educator
- Middle School Educator
- Secondary Educator
- Special Educator
- Speech Therapist
- Occupational Therapist
- Physical Therapist
- School Counselor
- School Administrator

What you can earn:
- CPR/AED Certification
- First Aid Certification
- Dignity for All Students (DASA) Certification
- Mandated Reporter Certification
Things you get to do

- College Visits and Field Trips
- Shadowing Experience
- Values, Ethics, Diversity and Perspectives Project
- Participate in Teacher Training Seminars

Colleges with Enrollment Agreements

- **Jamestown Community College**
  12 credits: 3 credits - English 1510; 3 credits - English 1530; 3 credits - Public Speaking 1610; 3 credits - Foundations of Education 1510. Credit granted through “College Connections” program; students must meet JCC minimum requirements and prerequisites.

Where it is held

- **Career and Technical Education Center at Olean**
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410
The New Vision - Health Professions program is a one-year, senior-level, highly academic program that allows students to explore the health care field while gaining high school and college credits. The program provides students the opportunity to learn basic medical concepts, gain exposure to many medical careers and settings, and familiarize students with anatomy and physiology of the human body at both the microscopic and macroscopic levels. The program also provides accumulation of up to 150 clinical hours in local hospitals/health care facilities.

Students will learn the basic principles of Medical Terminology - medical word building, pronunciation and use of medical terms. This program will develop critical thinking and writing skills through various projects and research papers. Students will also be able to develop into informed citizens through course work in Economics and Participation in Government.

**Where it can lead**
- Dentist
- Medical Lab Technologist
- Ophthalmologist
- Pharmacist
- Physical Therapist
- Physician
- Physician Assistant
- Registered Nurse
- Speech Therapist
- Ultrasound Technologist

**What you can earn**
- CPR/AED Certification
- First Aid Certification
- JCC Healthcare Studies Certificate
Things you get to do

- Diet Analysis Studied Through a Nutrition Project
- Dissection of Owl Pellets and Lab Specimens
- Conduct Experiments in Lab at JCC
- Values, Ethics, Diversity and Perspectives Project
- Participate in a Mock Tribunal
- College Visits and Field Trips

Colleges with Enrollment Agreements

- **Jamestown Community College**
  
  24 credits: 8 credits - Anatomy & Physiology I & II; 3 credits - Medical Terminology; 3 credits - Health Science; 3 credits - Introduction to Healthcare Studies; 1 credit - Introduction to Disease; 3 credits - General Psychology; 3 credits - either English Composition I or English Composition II. Credit granted through “College Connections” program; students must meet JCC minimum requirements and prerequisites.

Where it is held

- **Career and Technical Education Center at Belmont**
  
  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Olean**
  
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410
Power Equipment Technology combines the challenge of solving a mechanical problem and making a piece of power equipment perform. In this two-year program, students learn about the basic internal combustion engine theory (both gas and diesel), as well as gain practical experience with heavy equipment operation, preventative maintenance, reconditioning, and troubleshooting. Farm machinery and small engine repair are also covered. PET is designed to provide students with a basic set of mechanical skills. This skill set will allow students to branch out into many different mechanical career fields including: Power Sports, Small Engine / Consumer Products Service, Agricultural/Construction/Truck Repair, Welding/Metal Fabrication and Heavy Equipment Operation.

Where it can lead
- Agricultural Equipment Technician
- Construction Equipment Technician
- Outdoor Power Equipment Technician
- Powersport Technician
- Heavy Equipment Operator
- Heavy Truck Repair Technician

What you can earn
- New York State Technical Endorsement on High School Diploma
- OSHA Safety Certification
Things you get to do

- Change Ignition System, Rebuild the Charging, Starting and Fuel Systems on 1939 Ford Firetruck
- Rebuild the Cylinder Head on a Massey-Ferguson #285 Farm Tractor
- Perform a Fuel System Repair on Snow Blower for Community Organization

Where it is held

- Career and Technical Education Center at Ellicottville
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300

Colleges with Enrollment Agreements

- **Alfred State College (Agricultural Technology Department)**
  3 credits Technical Elective in Agriculture Technology program. To qualify, student must have B+ or 80% average each year in BOCES program; Acceptance into ASU program; Copy of BOCES transcript; Letter to program Director requesting articulation.

- **Alfred State College (Automotive Trades Department)**
  Course requirements waived based on NATEF / I-CAR / NYS Inspection checklists. To qualify, student must have 80% average in BOCES program; Instructor recommendation included with Alfred State College application; Complete Applied Technology articulation credit transfer form with Instructor, present portfolio (Profile) and review with Alfred advisor within five days of the start of the semester; Maintain 2.5 GPA at ASU.

- **Ohio Technical College**
  Credit for up to two Diesel Technology Modules in Industrial Equipment I and II. CA BOCES must have an ASE/NATEF Certified program; provide copy of certification to OTC; Student must have “B” average or higher in BOCES program; Pass test at OTC in modules for which credit will be granted; Start at OTC within one year of high school graduation.

- **Pennsylvania College of Technology**
  Advanced placement based on competency assessment form. If student accepted into program, request “Competency Assessment” form; BOCES instructor completes and returns form to college; credit granted after college review.

- **SUNY Cobleskill**
  1-3 credits for AGEN 101 (Introduction to Agricultural Engineering); credits granted based on portfolio review. To qualify, student must have 85% average in BOCES program; NYS High School Diploma; Instructor recommendation; Complete SUNY Cobleskill application and send with recommendation.
Pre-Engineering and CADD

What it’s about

This structured, yet flexible high school program offers students in-depth, hands-on knowledge of engineering and technology-based careers. The three-tiered approach to learning flows from foundation courses, to specialization courses, to a capstone course. Students will learn engineering design and explore technology systems and manufacturing processes. Logical thought processes are built through “Activity based Project based Problem based” (APPB) learning experiences in the program. Students will formulate solutions to open-ended engineering questions. The program prepares students for careers and further study in design, engineering, and related fields.

Where it can lead

- Computer Aided Drafter
- Engineering Technician
- Engineer
  - Mechanical
  - Industrial/Process
  - Electrical
  - Civil
- CADD Designer
- Designer Drafter

What you can earn

- New York State Technical Endorsement on High School Diploma
Things you get to do

- Create and Analyze Models Using Specialized Computer Software
- Construct and Test Electronic Circuitry for Functionality
- Apply Principles of Robotics and Automation to the Creation of Models of Three-Dimensional Designs

Where it is held

- Career and Technical Education Center at Belmont
  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

Colleges with Enrollment Agreements

- **Bryant and Stratton College**
  Up to 9 credits from the following (3 credits each): GRAD 100 (Introduction To Design)  
  TECH 100 (Business Information Systems and Principles); BUSS 100 (Business Principles) 
  COMM 130 (Intro to Information Literacy and Research). To qualify, student must have 85% 
  average in BOCES CTE program; Instructor Letter of Recommendation; Complete Bryant & Stratton 
  admission application and enroll in two-year program; Must enroll in B&S within 15 months of high 
  school graduation; Provide BOCES CTE transcript and certificate of program completion.

- **Erie Community College**
  3 to 12 credits, based on ECC’s PLTW grid; credit determined by which ECC program student is in 
  For CAD: 4 credits for DF106 (Technical Graphics I with AutoCAD). To qualify, student must have 85% 
  average in BOCES program; High school diploma; Submit ECC High School Transfer Credit Reference 
  Form signed by BOCES instructor; Pass ECC math and English placement test.

- **Pennsylvania College of Technology**
  Advanced placement based on competency assessment form. If student accepted into program, request 
  “Competency Assessment” form; BOCES instructor completes and returns form to college; credit granted 
  after college review.

- **Pittsburgh Technical College**
  12 credits total; 4 credits each for: CAD 101 (Drafting I); CAD 111 (AutoCAD); CAD 133 (Mechanical Drafting I). To qualify, student must have “B” or better average in BOCES program; 80% 
  or better on PTI’s final course exam; Notify Financial Aid Dept. of intention to articulate; Apply within one 
  year of graduation.

- **Rochester Institute of Technology (Dual Enrollment)**
  Up to 16 credits in various engineering programs - 4 credits each for: IED (Introduction to Engineering 
  Design); POE (Principles of Engineering); DE (Digital Electronics); CIM (Computer Integrated 
  Manufacturing). To qualify, student must have 85% average in BOCES PLTW course 70% or better in 
  RIT portion of the course’s final exam; Submit RIT “College Credit Application” and $200 fee for each 
  course by Dec. 31 of current calendar year.

- **SUNY Delhi**
  6 credits total: 3 credits for MECH 151 (Production Drawings) and 3 credits for MECH 130 (Intro to CAD - 
  Siemens Solid Edge) or MECH 240 (CAD II - Autodesk Inventor). Student must demonstrate knowledge in 
  competencies for each course; list of competencies provided by Delhi and reviewed by teacher; Submit 
  “Teacher Recommendation for College Credit” form by June 30.

- **Triangle Tech**
  Credit granted for courses for which student passes advanced standing tests with grade of 75 or better. 
  To qualify, student must have 2.0 high school grade average; apply by Dec. 31 prior to graduation, or 
  within one year of graduation date, if already graduated complete math and reading placement tests.
What it’s about

This structured, yet flexible program offers, students in-depth, hands-on knowledge of engineering and advanced manufacturing technology based careers. The three-tiered approach to learning flows from foundation courses to specialized courses. Logical thought processes and technical skills are built through “Activity/Project/Problem Based” (APPB) learning experiences in the program. Students learn introduction to design, principles of engineering, computer integrated manufacturing, design and development, and advanced manufacturing.

This program is open to all Junior and Senior students. Students can pursue a Junior/Senior option, dual credit/articulated credits and a technical endorsement on their High School Regents Diploma. Students can also pursue a Senior only option, leading to dual/articulated credit.

Where it can lead

- Mechanical Engineer
- Engineering Technician
- CAD Drafter
- Prototype Machinist
- CNC Operator
- CNC Programmer
- Production Machinist
- Industrial Electrician
- Tooling Journeyman

What you can earn

- New York State Technical Endorsement on High School Diploma
- OSHA Certification
- Autodesk Certification
Things you get to do

- Design and Manufacture Golf Putters
- Machine Parts for iPhone Speaker
- Create Mountain Boards
- Design and Create Drones
- Build Guitars

Colleges with Enrollment Agreements

- **Alfred State College**
  3 credits for MATT 1913 (Machinists Calculations).
  To qualify, student must have 80% on Algebra Regents exam, verified by high school guidance office or official transcript.

- **Erie Community College**
  Credits granted based on review of student’s portfolio.
  To qualify, student must have 85% average in BOCES program; High school diploma; Submit ECC High School Transfer Credit Reference Form signed by BOCES instructor; Pass ECC math and English placement test.

- **Jamestown Community College (Dual Enrollment)**
  3 credits for MCT 1270 (Machine Theory and Operation).
  Credit granted through “College Connections” program; students must meet JCC minimum requirements and prerequisites.

- **Pennsylvania College of Technology**
  Advanced placement based on competency assessment form. If student accepted into program, request “Competency Assessment” form; BOCES instructor completes and returns form to college; credit granted after college review.

Where it is held

- **Career and Technical Education Center at Olean**
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410
Welding and Metal Fabrication is a two-year program to prepare students for entry-level positions, apprenticeships, and college level training programs. Students learn and work in a professional environment to develop real world employee skills for success in future training and employment. Students who succeed in this program will have a broad base of skills related to the metalworking, manufacturing, and construction industries. Students will learn specific skills using the latest technology in welding and fabrication including SMAW, GMAW, FCAW, GTAW, OFC, PAC, as well as Shearing, Punching, Forming, Sawing, Grinding, and Drilling.

Topics covered include safety, layout skills, welded joint design, blue print reading, metal fabrication, metallurgy, testing, and inspection of welds.

Where it can lead

- Plumber, Pipefitter or Steamfitter
- Structural Worker
- Welder, Cutter, Solderer and Brazer
- Sheet-Metal Workers
- Welder, Cutter, Solderer and Brazer Aide
- Boilermaker
- Structural Metal Fabricator and Fitter
- Welding Technician
- Materials Engineer/Welding Engineer
- Welding Inspector
- Welding Sales Representative

What you can earn

- New York State Technical Endorsement on High School Diploma
- American Welding Society Entry Level 1 Certification
- OSHA Certification
Things you get to do

- Compete in Weld-Off at Niagara Orleans CTE Center
- Redesign a New Chasse for a Hot Rod
- Design and Create Hoist for Buffalo Maritime Center
- Build Truck Bed for BOCES Maintenance Sander Truck
- Outdoor Sculpture Project
- Build Weld Trailer for Welding Rig

Colleges with Enrollment Agreements

- **Alfred State College**
  3 credits for WELD 1723 (Welders Calculations I). To qualify, student must have 80% on Algebra Regents exam, verified by high school guidance office or official transcript.

- **Jamestown Community College (Dual Enrollment)**
  6 credits total; 3 credits each for: WLD 1200 (Safety and Cutting Processes) and WLD 1350 (Shielded Metal Arc Welding). Credit granted through “College Connections” program; students must meet JCC minimum requirements on Accuplacer exam.

- **Ohio Technical College**
  Credit for up to two Welding Modules. Student must provide copy of AWS certification to OTC; “B” average or higher in BOCES program; Pass test at OTC in modules for which credit will be granted; Start at OTC within one year of high school graduation.

- **Pennsylvania College of Technology**
  Advanced placement based on competency assessment form. If student accepted into program, request “Competency Assessment” form; BOCES instructor completes and returns form to college; credit granted after college review.

- **Triangle Tech**
  Credit granted for courses for which student passes advanced standing tests with grade of 75 or better. To qualify, student must have 2.0 high school grade average; apply by Dec. 31 prior to graduation, or within one year of graduation date, if already graduated; complete math and reading placement tests.

Where it is held

- **Career and Technical Education Center at Belmont**
  5536 County Route 48
  Belmont, NY 14813
  716-376-8322

- **Career and Technical Education Center at Ellicottville**
  5550 Route 242 E.
  Ellicottville, NY 14731
  716-376-8300

- **Career and Technical Education Center at Olean**
  1825 Windfall Rd
  Olean, NY 14760
  716-376-8410
Integrated Science using Nanotechnology

Nanotechnology focuses on the characterization, fabrication, and manipulation of biological and nonbiological structures on the scale of 1-100 nanometers in size. Encompassing nanotechnology is nanoscience, nanoengineering and technology, as well as physics, chemistry, and biological sciences.

All CTE students will gain an understanding of the role nanoproducts play and be able to identify nanoproducts already in use. They will understand the importance of material science and engineering in the development of new products and the career path to jobs in the nanotechnology field.

Students will have the opportunity to operate the JEOL 6010LA Scanning Electron Microscope (SEM), the Phenom ProX SEM, or Bruker Dimension Edge Atomic Force Microscope (AFM) and use it to image, analyze, and manipulate materials at the nanoscale. They will also learn about sample preparation using a Cressington 108 Manual Sputter Coater.

Component School use of the SEM

- Host teacher training workshops to introduce Nanotechnology
- Host component school science classes and introduce students to the world of Nanotechnology
- Schedule and prepare samples for remote sessions
Proven Success in Learning
- Focused and Independent

Today’s cutting-edge, rigorous and relevant career and technical education (CTE) prepares youth and adults for high-wage, high-skill, high-demand careers in established and emerging industries. High school students involved in CTE are more engaged, graduate at higher rates and typically go on to postsecondary education.

- 95% of CTE students graduate high school, which is 10% higher than the national average.
  [https://cte.careertech.org/sites/default/files/CTE_Student_Achievement_2018.pdf](https://cte.careertech.org/sites/default/files/CTE_Student_Achievement_2018.pdf)

- 78% of CTE graduates enroll in post-secondary education full-time.

- CA BOCES CTE programs offer 19 Certifications in 16 programs.

- Every CTE program at CA BOCES has articulation agreements with local and regional colleges offering our students college credits.

- A 2018-2019 NYS Education Dept. BOCES report card states that 92.74% of CA BOCES CTE graduates are either employed or are continuing their education.
Notice of Non-Discrimination

The Cattaraugus-Allegany-Erie-Wyoming Board of Cooperative Educational Services does not discriminate on the basis of an individual’s actual or perceived race, color, religion, creed, ethnicity, national origin, citizenship; status, age, marital status, partnership status, disability, predisposing genetic characteristics, sexual orientation, gender (sex), military status, veteran status, domestic violence victim status or political identity, gender expression, and religious practices or any other basis prohibited by New York State and/or federal non-discrimination laws in employment or its programs and activities. The District provides equal access to community and youth organizations. Inquiries regarding the District’s non-discrimination policies should be directed to: Civil Rights Compliance Officer, Human Resources, Cattaraugus-Allegany BOCES, 1825 Windfall Road, Olean, NY 14760, 716-376-8237. Email: CivilRightsCompliance@caboces.org